AMENDMENTS

Listing of Claims:

The following listing of claims replaces all previous listings or versions thereof:

1. – 61. (Canceled)

62. (New) A method of delivering an agent to a prostate cancer tissue comprising:

a) obtaining a peptide that selectively binds to prostate cancer tissue, wherein the peptide is less than 100 amino acids in length and includes a prostate cancer targeting motif having the amino acid sequence of any of SEQ ID NO:5 through SEQ ID NO:29, SEQ ID NO:34, SEQ ID NO:35, or SEQ ID NO:37, wherein the peptide is attached or fused to an agent that one desires to target to a prostate cancer tissue; and

b) exposing the peptide to a population of cells suspected of containing prostate cancer cells.

63. (New) The method of claim 62, wherein the population of cells is in a human subject.

64. (New) The method of claim 62, wherein the population of cells is a thin section of a tissue.

65. (New) The method of claim 62, further comprising detecting prostate cancer cells in said population.

66. (New) The method of claim 62, further comprising diagnosing prostate cancer.

67. (New) The method of claim 62, further comprising providing a prognosis for an individual with prostate cancer.

68. (New) The method of claim 62, further comprising categorizing the prostate cancer as androgen-dependent or androgen-independent.

69. (New) The method of claim 69, wherein said categorizing is based on the expression of IL-11Rα in the blood vessels of said prostate cancer.

70. (New) The method of claim 62, wherein the peptide comprises an amino acid sequence selected from SEQ ID NO:34 or SEQ ID NO:37.

71. (New) The method of claim 62, wherein the agent is a therapeutic agent or an imaging agent.

72. (New) The method of claim 71, wherein the agent is a polypeptide and the peptide and agent form a fusion protein.

73. (New) The method of claim 71, wherein the agent and peptide are administered to an individual having or suspected of having prostate cancer to treat or image the cancer.

74. (New) The method of claim 71, wherein the agent is a therapeutic agent.

75. (New) The method of claim 74, wherein the therapeutic agent is a drug, a chemotherapeutic agent, a radioisotope, a pro-apoptosis agent, an anti-angiogenic agent, a survival factor, an anti-apoptotic agent, an enzyme, a hormone, a hormone antagonist, a cytokine, a cytotoxic agent, a cytocidal agent, a cytostatic agent, a growth factor, a peptide, a protein, an antibiotic, an antibody, a Fab fragment of an antibody, a hormone antagonist, a nucleic acid, an antigen, a virus, a bacteriophage, a bacterium, a liposome, a microparticle, a magnetic bead, a microdevice, a yeast cell, a mammalian cell, a cell or an expression vector.

76. (New) The method of claim 75, wherein the agent is a pro-apoptosis agent is selected from the group consisting of gramicidin, magainin, mellitin, defensin, cecropin, (KLAKLAK)2 (SEQ ID NO:1), (KLAKKLA)2 (SEQ ID NO:2), (KAAKKAA)2 (SEQ ID NO:3) and (KLGKKLG)3 (SEQ ID NO:4).

77. (New) The method of claim 76, wherein the pro-apoptosis agent (KLAKLAK)2 (SEQ ID NO:1).

78. (New) The method of claim 75, wherein the agent is an anti-angiogenic agent selected from the group consisting of thrombospondin, angiostatin5, pigment epithelium-derived factor, angiotensin, laminin peptides, fibronectin peptides, plasminogen activator inhibitors, tissue metalloproteinase inhibitors, interferons, interleukin 12, platelet factor 4, IP-10, Gro-B, thrombospondin, 2-methoxyoestradiol, proliferin-related protein, carboxiamidotriazole, CM101,

Marimastat, pentosan polysulphate, angiopoietin 2 (Regeneron), interferon-alpha, herbimycin A, PNU145156E, 16K prolactin fragment, Linomide, thalidomide, pentoxifylline, genistein, TNP-470, endostatin, paclitaxel, Docetaxel, polyamines, a proteasome inhibitor, a kinase inhibitor, a signaling peptide, accutin, cidofovir, vincristine, bleomycin, AGM-1470, platelet factor 4 and minocycline.

79. (New) The method of claim 75, wherein the agent is a cytokine selected from the group consisting of interleukin 1 (IL-1), IL-2, IL-5, IL-10, IL-11, IL-12, IL-18, interferon-γ (IF-γ), IF-α, IF--β, tumor necrosis factor-α (TNF-γ), or GM-CSF (granulocyte macrophage colony stimulating factor).

80. (New) The method of claim 71, wherein the agent is an imaging agent.

81. (New) The method of claim 80, wherein the imaging agent is a radioisotope, a paramagnetic ion, or an enzyme.

82. (New) The method of claim 81, wherein the imaging agent is a paramagnetic ion selected from the group consisting of chromium (III), manganese (II), iron (III), iron (II), cobalt (II), nickel (II), copper (II), neodymium (III), samarium (III), ytterbium (III), gadolinium (III), vanadium (II), terbium (III), dysprosium (III), holmium (III) and erbium (III), lanthanum (III), gold (III), lead (II), and bismuth (III).

83. (New) The method of claim 81, wherein the imaging agent is a radioisotope selected from the group consisting of astatine^{211}, ^{14}carbon, ^{51}chromium, ^{36}chlorine, ^{57}cobalt, ^{58}cobalt, copper^{67}, ^{152}Eu, gallium^{67}, ^{3}hydrogen, iodine^{123}, iodine^{125}, iodine^{131}, indium^{111}, ^{59}iron, ^{32}phosphorus, rhenium^{186}, rhenium^{188}, ^{75}selenium, ^{35}sulphur, technicium^{99m} and yttrium^{90}.

84. (New) The method of claim 81, wherein the imaging agent is an enzyme selected from the group consisting of urease, alkaline phosphatase, hydrogen peroxidase and glucose oxidase.

85. (New) The method of claim 62, wherein the agent is a virus or phage.

86. (New) The method of claim 85, wherein the agent is a bacteriophage.

87. (New) The method of claim 85, wherein the agent is an adenovirus.

88. (New) The method of claim 85, wherein the agent is an adeno-associated phage.

89. (New) The method of claim 62, wherein the peptide is 25 amino acids or less in size.

90. (New) The method of claim 89, wherein the peptide is 10 amino acids or less in size.